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AMENDMENTS TO THE CLAIMS

- Claim 1.** (Previously Presented) A method for modulating the morphology of softwood pulp fibers comprising the steps of
- subjecting the pulp fibers to a metal ion-activated peroxide treatment carried out at a pH of between about 1 and about 9, and
- subjecting the pulp fibers to a refining treatment to form refined paper making pulp fibers.
- Claim 2.** (Original) The method of Claim 1 wherein said metal ion is a transitional metal ion.
- Claim 3.** (Original) The method of Claim 1 wherein said metal ion is iron.
- Claim 4.** (Original) The method of Claim 1 wherein said pH is between about 3 and about 7.
- Claim 5.** (Original) The method of Claim 1 wherein the fibers are subjected to the solution at temperatures between about 40 degrees C to about 120 degrees C.
- Claim 6.** (Original) The method of Claim 1 wherein the fibers are subjected to the solution for between about 10 minutes to about 10 hour.
- Claim 7.** (Original) The method of Claim 1 wherein said peroxide is present with said solution at a concentration of between about 0.2% and about 5% based on pulp.
- Claim 8.** (Original) The method of Claim 1 wherein said metal ion is present in said solution at a concentration of between about 0.002% and about 0.1% on pulp.

Claim 9. (Previously Presented) The method of Claim 1 wherein said softwood pulp fibers is subjected to said solution for a time sufficient to substantially act on at least the cellulose and hemi-cellulose of the pulp, causing oxidation and oxidative degradation of cellulose fibers.

Claim 10. (Previously Presented) The pulp of claim 15 wherein said softwood pulp has a modified morphology, leading to paper making properties substantially functionally equivalent to hardwood pulp papermaking properties.

Claim 11. (Previously Presented) The pulp of Claim 10 wherein the fibers of said softwood pulp, after treatment, exhibit a substantially shorter fiber length and distribution, and enhanced fiber collapsibility, than prior to treatment.

Claim 12. (Previously Presented) The pulp of Claim 10 wherein said softwood pulp is oxidatively degraded relative to untreated softwood pulp.

Claim 13. (Previously Presented) The pulp of Claim 10 wherein the softwood pulp exhibits a Canadian Standard Freeness of between about 115 and about 590.

Claim 14. (Previously Presented) The pulp of Claim 13 wherein the softwood pulp exhibits a Kajaani average fiber length of between about 1.0 and 1.9 mm.

Claim 15. (Original) A pulp comprising between about 50% and 90% hardwood pulp and the remainder being softwood pulp which has been subjected to a metal ion-activated peroxide treatment carried out at a pH of between about 2 and about 9 and a refining treatment.

Claim 16. (Original) The pulp of Claim 15 wherein said metal ion is a transitional metal.

Claim 17. (Original) The pulp of Claim 15 wherein said metal ion is iron and said pH is between about 3 and about 7.

Claim 18. (Original) The pulp of Claim 15 wherein said pulp is substantially functionally equivalent to a hardwood pulp as respects the usefulness of the pulp in papermaking.

- Claim 19.** (Previously Presented) The pulp of Claim 11 wherein the softwood pulp is used to manufacture a paper web material.
- Claim 20.** (Previously Presented) The method of claim 1 wherein said softwood pulp fibers are Kraft pulp fibers.
- Claim 21.** (Previously Presented) The method of claim 1 wherein said softwood pulp fibers are Southern Pine pulp fibers.
- Claim 22.** (Previously Presented) The method of claim 1 wherein said softwood pulp fibers are bleached pulp fibers.
- Claim 23.** (Previously Presented) The method of claim 1 wherein said softwood pulp fibers are bleached Kraft pulp fibers.
- Claim 24.** (Previously Presented) The method of claim 1 wherein said refined pulp fibers exhibit a substantially shorter fiber length and distribution and enhanced fiber collapsibility than prior to treatment.
- Claim 25.** (Previously Presented) The method of claim 1 wherein said refined pulp fibers exhibit paper making properties substantially functionally equivalent to hardwood pulp papermaking properties.
- Claim 26.** (Currently Amended) The method of claim 1 wherein subjecting comprises treating ~~said~~ said pulp fibers with a composition comprising peroxide and metal ions.
- Claim 27.** (Previously Presented) The method of claim 1 wherein said metal ions are selected from the group consisting of iron, copper, cobalt or a combination of two or more thereof.
- Claim 28.** (New) The method of Claim 1, comprising subjecting the pulp fibers to a metal ion-activated peroxide treatment carried out at a pH of between about 1 and about 7 at a

temperature of from 40 to 120 degrees Celcius for a time period of from 10 minutes to 600 minutes; and

subjecting the pulp fibers to a refining treatment to form refined paper making pulp fibers.

Claim 29. (New) The method according to Claim 1, further comprising adding a metal ion to peroxide.

Claim 30. (New) The method according to Claim 29, further comprising adding a metal ion to peroxide in the presence of the pulp.

Claim 31. (New) The method according to Claim 30, further comprising adding between about 0.002% and about 0.1% of metal ion based on pulp to peroxide in the presence of the pulp.

Claim 32. (New) The method according to Claim 29, further comprising adding between about 0.002% and about 0.1% of metal ion based on pulp

Claim 33. (New) A pulp comprising between about 50% and 90% hardwood pulp and the remainder being softwood pulp which has been subjected to the method according to claim 32.

Claim 34. (New) A method for modulating the morphology of softwood pulp fibers, comprising

adding a metal ion source to a solution comprising peroxide to form a metal-ion activated peroxide; and

contacting the pulp fibers with the metal ion-activated peroxide at a pH of between about 1 and about 9.

Claim 35. (New) The method according to Claim 34, further comprising refining the pulp.

Claim 36. (New) The method according to Claim 34, wherein the metal ion source is a metal salt.

Claim 37. (New) The method according to Claim 34, wherein the metal ion source is added at an amount such that between about 0.002% and about 0.1% of metal ion is present based upon the weight of the pulp.

Claim 38. (New) The method according to Claim 34, comprising
contacting the pulp fibers with the metal ion-activated peroxide at a pH of between about 1 and about 7 at a temperature of from 40 to 120 degrees Celcius for a time period of from 10 minutes to 600 minutes.